

Jeorse Park Beach: Gull Exclusion Program to Improve Nearshore Water Quality



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Jeorse Park Beach

Nuisance Bird Issues

- **Ring Billed & Herring Gulls**

- High numbers present continuously on beach
- Large nesting colonies within 10 miles

- **Canada Goose**

- Populations nest nearby
- Utilize beach for safety during flightless period

- **Double Crested Cormorant**

- Frequently present on beach
- Nesting colony nearby



#1 Culprit: Ring Billed Gull



- Social colony lifestyle increases survival and concentrates conflicts
- Colonies in the East Chicago area > 10,000 individuals
- Opportunistic feeders
- Habituated to human presence
- Adapted to living in cities
- Nest on roofs and piers in Lake Michigan coastal cities

What Attracts Gulls to Beaches



- Loafing and roosting areas
- Trash
- Unattended food
- Handfeeding
- Seasonal *Cladophora* algae mats
 - Present at Jeorse Beach Park
- Dead/dying aquatic fauna
 - zebra mussels
 - Fish (alewives, gobies)

Wild Goose Chase's Beach Gull Management Program



Gull Exclusion Program



- Tailored to each individual beach's environment and situation
- One or more patrol teams
 - One handler
 - Border Collie dog partner
- Trained specifically for beach gull management
- Provides the appearance of a natural predator on site

Jeorse Beach

Gull Harassment History

2015

- Summer 2015 4 week program July 6th through August 1st
- Sunrise to 7pm
- 7 days per week
- Determined that gulls likely play a large role in Jeorse Park Beach's water quality issues.

2016

- May 1st through Aug 31st.
- Sunrise to 7pm
- 7 days per week
- Further evidence that gulls are a significant contributor of E.coli bacteria to Jeorse Park Beach
- 24% exceedance rate
 - Lowest number of bacterial exceedances since testing began

Jeorse Beach

2017 Gull Harassment Program

- May 1st through Aug 31st.
- Prevents birds from arriving in the morning looking for a loafing spot
- Prevents/discourages birds from loafing and foraging throughout the day
- Prevents birds from choosing the beach as an overnight roosting area

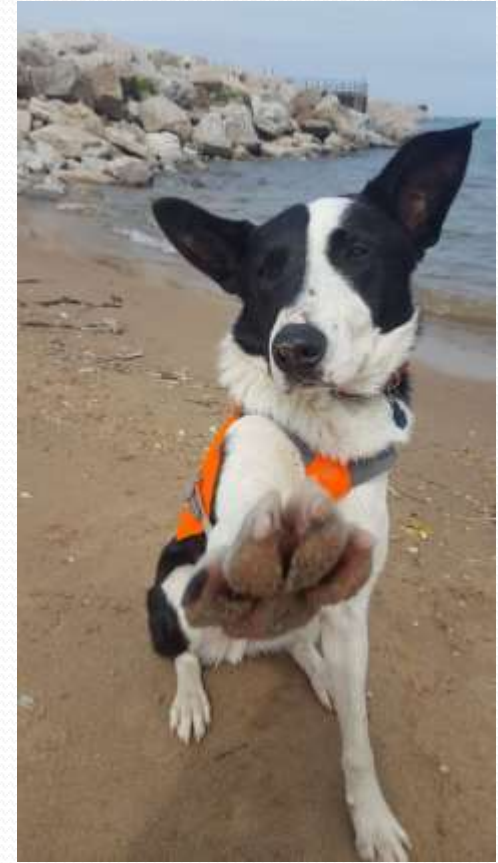


The Working Border Collie



- Perceived natural predator
 - Visually and behaviorally mimic coyote
- Herding instinct
 - Stalk (The “eye”)
 - Chase
 - Persistence
 - Chase birds in flight and water
- Intelligence
- Desire to please handler
- Loves/needs to work

Jeorse's 2017 Canine Team



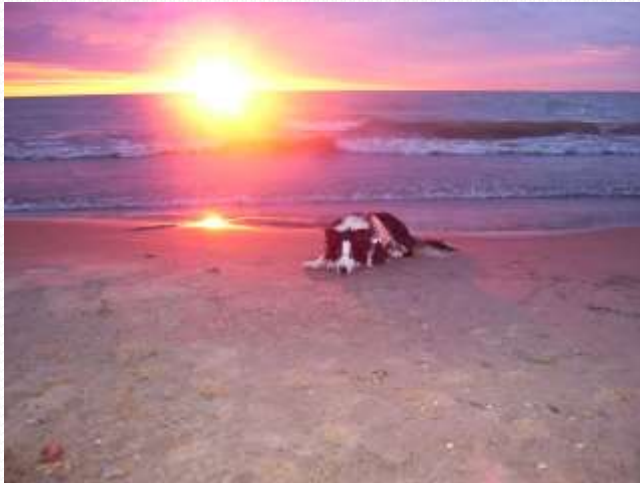
From left to right: Octane, Foxi, Dash, Oz

Jeorse's 2017 Canine Team



From left to right: River, Bree, Eva

Jeorse's 2017 Canine Team



Top left: Tyler. Bottom left: Sully. Top right: Clark. Bottom right: Chief

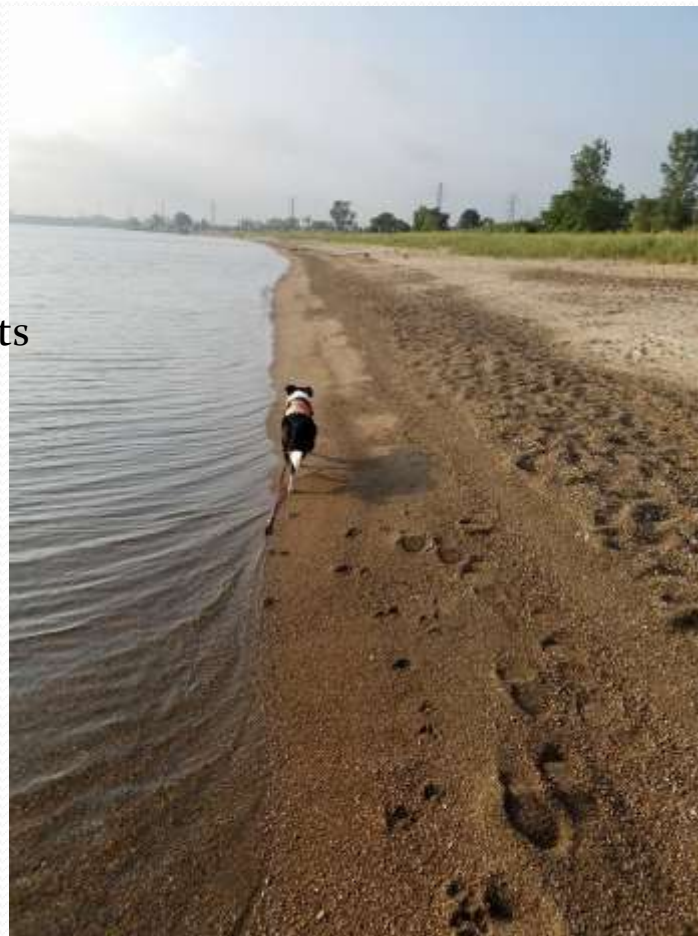
Overview of a Patrol Day



- Work with dog to remove present birds
- Initial, final, and hourly counts of target birds
- Educate beach patrons about program
- Halt and educate handfeeders
- Pick up and dispose of trash and broken glass on beach
 - Decreases attractants
 - Improves beach image and safety
- On site dog training
 - Maintenance
 - Perfecting techniques

2017 Gull Harassment Program: Gull/Beach Data Collected

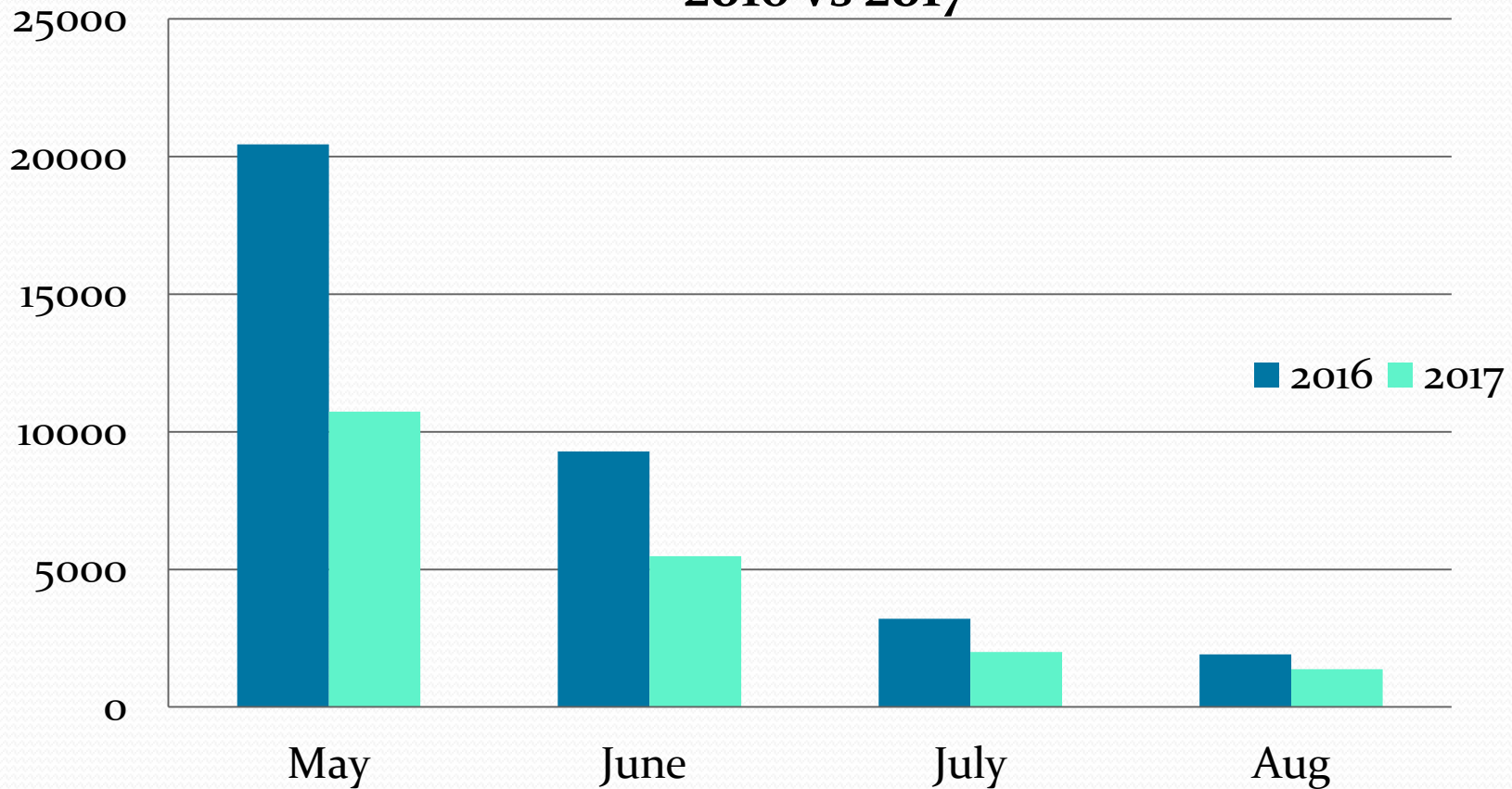
- Counts of gulls taken:
 - Initial AM
 - Initial PM
 - Hourly
 - Handfeeding episodes
 - Ending
- Other variables taken during gull counts
 - Weather conditions
 - Water conditions
 - Flag color
 - Percentage of beach occupied by people
 - Non-Target bird species
 - Banded/Tagged birds
 - Beach activity
 - Special events
 - Watercraft near shore
 - Sports games
 - Beach comber
 - Other extraneous variables



2017 Summary of Gull Data

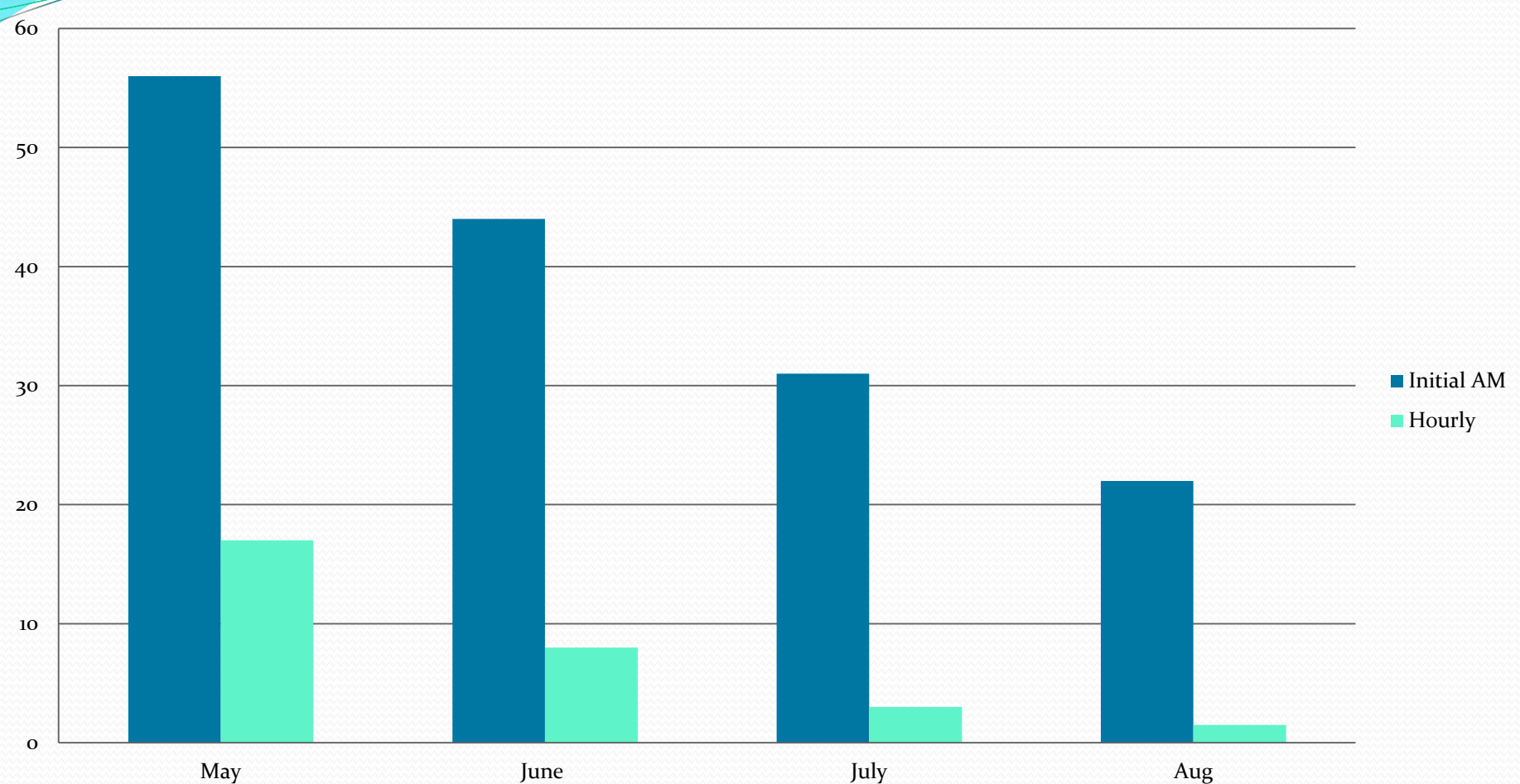
- ◆ WGC border collies chased a total of 19,583 gulls off of the beach within the 4 month program.
 - ◆ This is a reduction of nearly 50% from 2016.
 - ◆ This is likely due in part to remembered conditioning from the 2016 program
- ◆ Juveniles were first seen on June 29th.
- ◆ Handfeeding episodes were reduced to 15, down from 30 in 2016.
 - ◆ Could be part of the reason for the dramatic reduction in gull numbers.
- ◆ Non-target species were observed 356 times and consisted primarily of:
 - ◆ Canada geese
 - ◆ Crows
 - ◆ Mallard ducks
 - ◆ Double-crested Cormorants
 - ◆ Barn Swallows
 - ◆ Kildeer
 - ◆ Blue herons
 - ◆ Caspian terns
 - ◆ 11 other species.

Total Gulls Chased by Month 2016 vs 2017



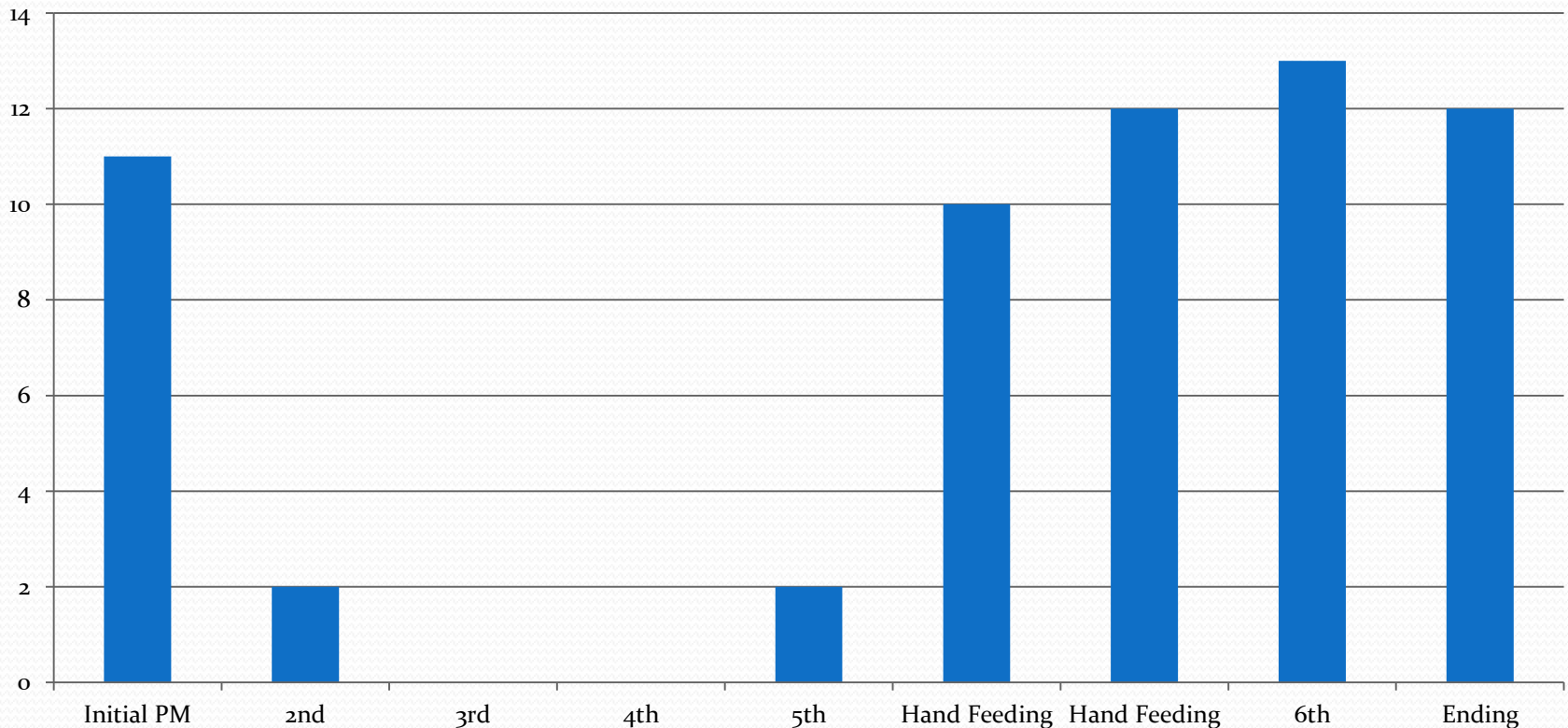
- Gull numbers were reduced by 94% over the duration of the program.
- Gull numbers were reduced by nearly half each progressive month of the program. This shows that as the gulls learned that the dogs were there to stay, it conditioned them to leave the site entirely for the duration of the swim season.
- Gull numbers were much lower overall in 2017 than 2016.

Average Gull Counts



- The Initial AM count shows approximately how many gulls would have remained on the beach for the entire day if not for the dog patrol program.
- The Hourly count shows the approximate number of gulls actually present on the beach during the dog patrol program.

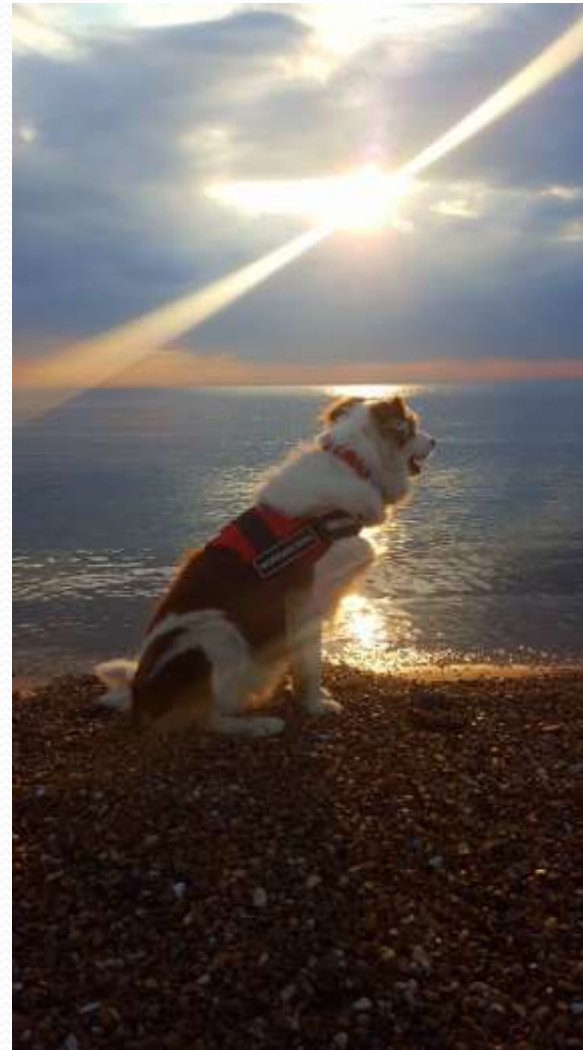
Increase in Gulls During Handfeeding Episode



Handfeeding draws birds in through social cues to the beach where they were not present before. Handfeeding increases stubbornness to leave the area.

2017 Gull Harassment Program: Final Thoughts

- Fewer handfeeding episodes may mean fewer gulls
- Patrons picnicking and grilling attracts gulls
- Algae buildup along W side of pier. Goose families hanging out there eating the algae
- Boat activity in nearshore water helping keep birds away
- Patrons responding very positively to program!



Future Recommendations

- Gull Management through continuous canine patrol has been extremely effective at improving water quality at Jeorse Park Beach and should continue.
- Management of waterbird nesting populations (geese, gulls, cormorants) to balance populations through egg depredation should be a long term goal.



Impacts of a Gull Management Program

Positive

- Create cleaner, safer beaches for patrons
- Improve local water quality
 - Fewer beach closings
 - Determines/significantly reduces impact of gulls as a non-point *E. coli* source
- Boost local economy
 - Generate revenue for local businesses
- Inhibit uncontrolled growth in ring-billed gull population

Negative

- Gulls move to another area
 - Become someone else's "problem"
- Control measures may generate negative PR
- Government funding could be used for other things

Nuisance Bird Management Consultation



- Site specific with full support
- Gull Management
 - Urban Management
 - Egg/Nest Depredation
 - Structural Deterrents
 - Beach Harassment /Consulting Programs
- Canada Goose Management
 - Egg/Nest Depredation
 - Deterrent Landscaping
 - Harassment programs
- Other Nuisance Birds
 - Pigeons, turkeys, starlings, crows, turkey vultures

Wild Goose Chase, Inc.

- Gull population research/management consultation
 - Provide a scientifically supported, efficient, and cost effective method of Ring-Billed Gull management
 - Further understanding of urban gull behavior and biology
 - Gull population dynamics of Lake Michigan coastline
 - Determine the significance of gull droppings as a non-point source by continuing to correlate the success of the management program with bacterial levels
 - Correlate weather and water conditions with gull numbers and *E. coli* levels

Questions?

